



## Front Country Trails Multi-Jurisdictional Task Force

P.O. Box 1990, Santa Barbara, CA 93102-1990  
Fax Number 805.564.5480

Phone Number 805.564.5437  
[www.santabarbaraCA.gov](http://www.santabarbaraCA.gov)

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**AGENDA DATE:** June 2, 2010

**TO:** Front Country Trails Multi-Jurisdictional Task Force

**FROM:** Front Country Trails Task Force Staff

**SUBJECT:** Trail Assessment Project

**RECOMMENDATION:** That the Front Country Trails (FCT) Multi-Jurisdictional Task Force:

- A. Receives a report on the results of the pilot assessment of the Cold Spring Trail; and,
- B. Provides direction on the scope of the full scale assessment project, including the parameters for data collection.

### **DISCUSSION:**

#### Background

The 2008 Front Country Trails Management Recommendations call for the completion of an assessment of existing trail conditions to support the development of a trail management and maintenance program, trail guidelines and standards, and trail use designations. An assessment of existing trail conditions is also important for the development of a funding plan and trails strategy.

At the July 1, 2009 regular meeting, the FCT Task Force recommended that staff move forward with the implementation of a trails assessment project. Although a number of staff and stakeholders had been trained in the manual trail assessment method UTAP (Universal Trail Assessment Process), the Task Force recommended that Beneficial Designs complete the baseline trail assessment using the automated HETAP since it would not require extensive volunteer time. It was assumed that any additional manual UTAP data collection completed by staff and volunteers could be integrated with the automated data.

In developing the trail assessment scope of work with Beneficial Designs, it was determined that any additional trail assessment data collected manually after the baseline assessment could not be easily integrated with the automated HETAP data. Data collected with the HETAP software would have to be manually entered into the UTAP software, a time consuming and costly task. Examples of subsequent data

collection includes information about new or changing trail conditions, and additional features such as line of sight, drop off or step-out.

Due to the compatibility concerns, agency staff developed a two-phase trail assessment project as reported at the December 2, 2009 FCT Task Force meeting. The first phase was intended as a pilot to help inform both the scope and approach to the full scale surveys. The UTAP method was selected for the pilot because it could be implemented at a lower cost by agency staff and volunteers under the direction of Michelle Smith, who has more than a decade of experience with UTAP and Beneficial Designs. At the time, it was anticipated that the first phase could be complete in 2-3 months (with 3-4 survey days/month).

In addition, it was anticipated that the first phase of the assessment would help determine whether the trail assessment could be completed in a timely manner and whether the information would support trail maintenance and management decision making. It was also determined that a full scale assessment of the all of the trails could not be completed in 2009 due to the post-Jesusita fire mulching efforts, and the potential for the wet weather season to cause significant trail erosion.

At the FCT Task Force meeting on March 3, 2010, staff reported on the progress of the project and recommended an evaluation of the initial survey results prior to moving forward with full scale implementation. Combined with public comment, the Task Force recommended re-evaluating the HETAP process so that the full-scale trail assessment project could be completed more quickly.

### Cold Spring Trail Assessment

Data collection and data entry for 2.8 miles of Cold Spring Trail was complete in late April 2010. Reports and data analysis for the Cold Spring Trail Assessment will be presented at the Task Force meeting on June 2, 2010.

Field work was completed in 11 days. Staff included Michelle Smith, who was hired by City Parks and Recreation for the project, Mark Guy, Santa Barbara County Parks, and Kathy Frye, City Parks and Recreation. A number of volunteers provided invaluable assistance, including: Joanie McLaughlin, Mike Osborn, Jim Childress, Kalon Kelly, Demetrius, Scott Burns, Sonia Connors, Otis Calef, Melissa Beaugrand, and a number of San Roque School students. Joanie McLaughlin in particular, volunteered for seven of the 11 days. Her contribution was critical for completion of the project. City of Santa Barbara staff spent three days entering the field data into the TrailWare software.

Specific measurements for key trail features, including design tread, minimum clearance width, design height, and minimum obstruction height used for the assessment are outlined in the table on the following page. The measurements are based on the existing Forest Service standards for the front country trails, reflect use of the trails by hikers, bikers and equestrians, and provide a valuable reference point for existing trail conditions and trail management needs.

<b>Trail Feature Name</b>	<b>Trail Feature Definition</b>	<b>Measurement (inches)</b>
Design Tread Width	Width of clear path of travel.	24
Minimum Clearance Width	Minimum width of trail that occurs within boundary on both sides of trail; may be the same or less than design tread width.	24
Design Height	Vertical height of clear path of travel; measured from trail bed to over head.	120
Minimum Obstruction Height	Height or depth of obstruction (e.g. rock or stump) found in the path of travel, as measured from the trail surface; minimum height to be considered a barrier to a user.	12

Data collection also included other trail features such as grade, slope, surface type, drainage, and entrenchment. The Trailware software generates a series of comprehensive reports that can then be used to prioritize and direct trail maintenance activities and provide information to the public about trail conditions. Reports provide the following types of information:

- Typical trail surface, width, grade and cross slope
- Surface type (soil, rock) and whether it is very soft, soft, firm or hard
- Grade of trail in ranges
- Locations where the trail does not meet the minimum clearance width
- Locations on the trail where there are overhead obstructions and the type of obstruction (vegetation) and whether maintenance will remove the obstruction
- Locations on the trail where there are trail obstructions, the type of obstruction (rock or vegetation) and whether maintenance will address the obstruction
- Areas and length of the trail where the trail is entrenched and eroding

#### Full-scale Trail Assessment with HETAP and Beneficial Designs

The following scope for the full scale trail assessment project is based on further review of the benefits of the automated trail assessment process (HETAP), an evaluation of the relative costs and time required to complete the trail assessment (both manual and automated), and discussions with Beneficial Designs. The full scale trail assessment will provide detailed information about current conditions of the front country trails, the extent to which they meet most trail standards, and options for improving the trails through regular maintenance over time.

The full scale trail assessment would include an estimated 25 miles of trail, including Cold Spring, West Fork Cold Spring, Romero Canyon, Jesusita, Tunnel, Rattlesnake, and San Ysidro. Data would be collected by Beneficial Designs using the automated trail assessment process (HETAP). Similar to the pilot assessment for Cold Spring, standard trail data to be collected includes grade, cross-slope, tread width, minimum

clearance width, surface, length and other features. Measurements used in the Cold Spring Trail Assessment would be used in the full scale assessment.

### Other Trail Features

Collection of data of other trail features, such as “line of sight”, “drop-off”, and “step-out” has been recommended by some trails stakeholders. Line of sight is defined as an imaginary line from the eye to a perceived object, or an unobstructed path. Drop-off is defined as a very steep or perpendicular descent. Step-out is defined as an area outside the clear path of travel. The purpose of collecting this type of data would be to further inform trails management discussions and decision making.

There are a number of challenges with trying to both collect this type of data and apply it to trail management policy. Design parameters for standard trail classifications, including those developed by the Forest Service, do not address these features. As a result, there are no models to follow. Both the definition and measurement standard of the feature is subjective. A standard for one user group may not be the same as the standard for another user group. To move forward with collection of these features, number of questions need to be answered including, but not limited to:

- How is line of sight determined? When should it be measured? What is an adequate line of sight/what is the standard?
- How is drop-off defined? When should drop-off be measured? What is the standard?
- How is a step-out determined? When should it be measured? What is the standard?

If Beneficial Designs is to be tasked with collecting this information, the three agencies and the Task Force need to develop both definitions and measurement standards prior to implementing the full-scale assessment. Alternatively, the trail assessment could be completed with the standard trail parameters.

### Project Funding and Schedule

Based on preliminary conversations with Beneficial Designs, it is estimated that the cost to complete the baseline trail assessment will be \$9,000. This assumes 8-10 days of travel, staff training, trails surveys, and report generation. The agencies would need to purchase the software to manage the data and dedicate the resources of a technician to conduct the analysis and produce reports. The technician would be hired as a temporary staff member since the agencies do not have available, qualified staff for the project. As shown on the following page, it is estimated that the total cost for the trail assessment is estimated to be \$15,525.

Additional costs would be incurred if Beneficial Designs collected data on the other trail features (line of sight, drop-off, step-out), and if the agencies decided to purchase the HETAP equipment for subsequent surveys. The cost of collected data for the other features will depend on the parameters, the number of data points, and the time to enter

the data. Until the parameters for the other features are defined, the cost of data collection cannot be estimated.

#### **Cost Estimate for Baseline Assessment**

<b>Item</b>	<b>Amount</b>
Baseline Assessment – Standard Trail Data	\$9,000
HETAP Software	\$1,525
Analysis of Trail Assessment Data (200 hours @\$25/hour)	\$5,000
Total	\$15,525
<b>Additional/Other Features</b>	<b>unknown</b>
<b>HETAP Equipment for Subsequent Surveys</b>	<b>\$8,000</b>

Complete funding for the project is not yet secured. It is anticipated that the three agencies could contribute \$5,000 to \$6,000 for the project at the beginning of the new fiscal year. Trails stakeholders such as the Sierra Club and the Santa Barbara County Trails Council have indicated an interest providing some funding but this has not been confirmed. Additional trails organizations may also be interested in supporting the project. If scope of work is finalized and funding can be secured by mid-July, it is anticipated that the survey work and data analysis could be completed by the end of October.

**PREPARED BY:** Jill E. Zachary, Assistant Parks and Recreation Director  
Kathy Frye, Natural Areas Planner, City of Santa Barbara